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State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

January 15, 2016

Scott Bakken
Energy Fuels Resources (USA)
225 Union Boulevard, Suite 600
Lakewood, Colorado 80228

Subject: Initial Review of Revised Reclamation Cost Estimate, Energy Fuels Resources (USA),
Energy Queen Mine, S/037/0121, San Juan County, Utah

Dear Mr. Bakken:

The Division of Oil, Gas and Mining has reviewed the referenced draft reclamation cost estimate that was received December 8, 2015. The attached comments will need to be addressed before the Division can approve the estimate.

After the cost estimate is determined complete, the Division will ask that Energy Fuels submit the additional surety required for escalation to 2020 dollars. Please submit your response to this review by February 12, 2016.

Please contact the lead for this project, Mike Bradley, at 801-538-5332, the surety engineer, Peter Brinton, at 801-538-5258, or me at 801-538-5261 if you have questions about the review or if you would like to schedule a meeting to discuss the comments. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB:mpb:pb

Attachment: Review

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**INITIAL REVIEW OF SURETY ESTIMATE
TO COMMENCE LARGE MINING OPERATIONS
Energy Fuels Resources (USA), Daneros Mine, S/037/0121
January 15, 2015**

General Comments:

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
1	General	The Division may have additional comments based on the responses to this review. Please attempt to provide a complete, technically adequate submittal.	OGM	

R647-4-113 – Surety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
2	General	Costs provided are for 2014, not 2015. Because the costs are very similar to costs for 2015, recalculation will not be needed. Cost data is now available for 2016 which could be used to escalate the cost estimate to 2021.	pnb	
3	3.0 Summary	The amount of revegetation cost is different than on the Bonding Calculation Summary Sheet, and the total bond amounts are also different. Correct both sheets.	pnb	
4	Bonding Calculation Summary	The escalation factor for 2015 and early 2016 is 1.2%, not 0.5%. Correct the factor, which affects the total bond amount.	pnb	
5	Mob & Demob	Identify the source for the mobilization and demobilization costs. Mobilization of up to five pieces of equipment (LHD, dozer, loader, excavator, and truck) likely would cost significantly more than \$4,500, depending on the assumptions. The Division typically assumes mobilization and demobilization are 10% of the direct costs.	pnb	
6	Demo & Removal	The following R.S. Means line item is more appropriate for culvert removal, though neither cost code includes excavation: 02 41 13 40 0180.	pnb	
7	Demo & Removal	The cost code used for pre-engineered buildings does not include removal costs. The following section of R.S. Means line items is more appropriate for building demolition: 02 41 16 13 0500.	pnb	
8	Demo & Removal, Concrete	The following section of R.S. Means line items is more appropriate for demolition of concrete pads and other structures associated with buildings: 02 41 16 17.	pnb	
9	Omission	Clarify the disposal method for demolished concrete (e.g. floors) and include the respective costs.	pnb	
10	Tank Removal	For disposal of fuel tanks, please use Means cost 02 65 10.30 and include removal of sludge and product, transportation, disposal of tank at a certified facility, and any other related costs.	pnb	
11	Water Well Closure	Please state how many wells are wet (encounter significant water) and how many are dry. For wet holes use Means 33 21 13.10 8520. Wet holes must be filled with cement or bentonite at least fifty feet above and below the aquifer. A drill rig must be used to ensure proper well plugging.	pnb	

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
12	Water Well Closure	Include a cost for mobilization of appropriate equipment capable of abandoning a water well of this depth.	pnb	
13	Water Well Closure	Clarify which water well will need to be abandoned, since two are shown on the Notice maps.	pnb	
14	Omission	Provide costs for removal of introduced deleterious materials (such as fuels and chemicals) that present at the site, including underground.	pnb	
15	Hazardous Materials	Please include costs for pre-demolition building surveys for asbestos and universal hazardous wastes as required by NESHAPS and Utah DAQ / DEQ	mpb	
16	Hazardous Materials	Please include a cost estimate for removal and disposal of regulated hazardous materials on site	mpb	
17	Omission	Include costs to remove generators and compressors, as needed.	pnb	
18	Omission	Include costs to remove significant underground mine equipment and machinery.	pnb	
19	Earthwork, Omission	The portal sealing (backfill) costs are for one portal. Revise the calculations to include a second portal.	pnb	
20	Earthwork, Calculation	For a 2.5 cu yd LHD (ST-2D), please use costs from Blue Book 2015: \$3,830.00 monthly rate (176 hrs/month). The operating cost is \$30.00/hour. Add 10% to the rental rate and operating cost for overhead and profit. Use the Means labor rate of \$74.15 which includes overhead and profit. Please contact the Division for explanation of how to include overhead and profit.	pnb	
21	Earthwork, Calculation	For a D7 dozer please use costs from Blue Book 2015: \$15,875.00 monthly rate (176 hrs/month). The operating cost is \$76.20/hour. Add 10% to the rental rate and operating cost for overhead and profit. Use the Means labor rate of \$74.15 which includes overhead and profit. Please contact the Division for explanation of how to include overhead and profit.	pnb	
22	Earthwork, Calculation	For 966H please use costs for Bluebook 2015: \$8,250.00 monthly rate (176 hrs/month) operating costs \$58.70/hr, and 10% to the rental rate and operating cost for overhead and profit. Use Means labor \$74.15 which includes overhead and profit. Please contact the Division for explanation of how to include overhead and profit.	pnb	
23	Earthwork, Omission	Production for the dozer for grading of the rock pile assumes 0% grade. Since the rock pile slopes at the angle-of-repose to the drainage, and can't permanently be pushed down into the drainage, material will need to be moved from the angle-of-repose slope to the top of the dump in order to achieve slopes of 3H:1V. With a dozer, this would require pushing material uphill. The production factor will drop significantly, and costs increase for this type of regrading. Re-evaluate methods for reclamation and adjust the costs accordingly.	pnb	
24	Earthwork, Omission	Identify the haul distances for the loader.	pnb	
25	Omission	Include the operation of the dump truck in the calculations.	pnb	
26	Equipment Rental Costs	Mobilization of an excavator is needed for the planned work at the vent shafts, and this memo is incomplete without the excavator costs. Include costs associated with the excavator.	pnb	